Introduction

The **IFC-1000PSE** is an electrical copper to optical fiber Gigabit Ethernet solution designed to make conversion between 10/100/1000Base-T and 1000Base-SX/LX with SFP module. The IFC-1000PSE complies with IEEE802.3af Power Over Ethernet standards and has a built-in AC power supply. This PoE (Power over Ethernet) media converter is a Power Sourcing Equipment (PSE) which combines data received over a TP link with 48VDC power, providing power to IEEE802.3af powered device (PD) over the existing CAT5e or CAT6 UTP cable. Other features include Link Fault Pass through (LFP), Store and Forward Switching, and auto or forced mode setting for copper Ethernet.

Features

- 10/100/1000Base-T to 1000Base-SX/LX SFP
- IEEE 802.3af-2003 PSE (power sourcing equipment)
- Auto-negotiation or forced mode on UTP
- Auto MDI/MDIX
- Store and Forward Switching Mechanism
- Forward 1632 bytes (max.) packet
- Supports 4k MAC address
- Supports 256K bytes packet buffer
- Supports Link Fault Pass through (LFP) function
- For applications including IP Cameras, IP phone and wireless Access Points that require less than 15W

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User Guide

Gigabit Ethernet PSE Fiber Media Converter
•IFC-1000PSE-AC
•IFC-1000PSE/A

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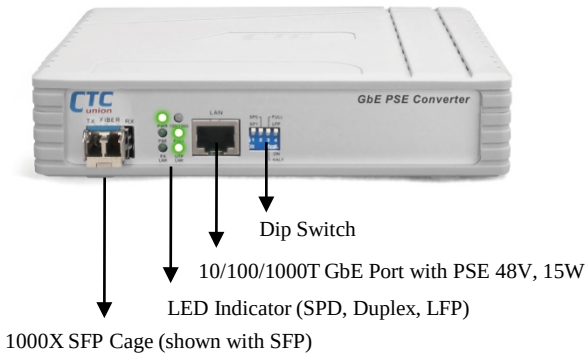
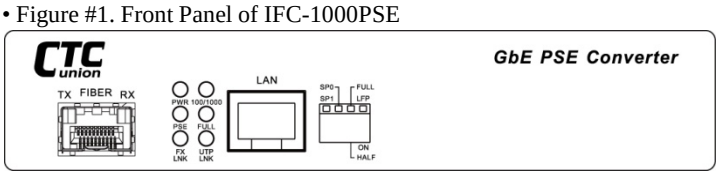
V1.2

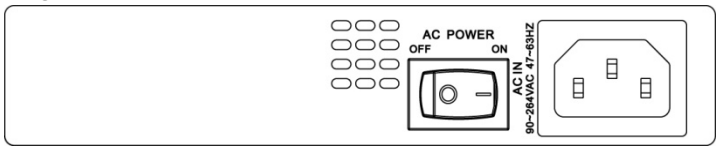
Panel



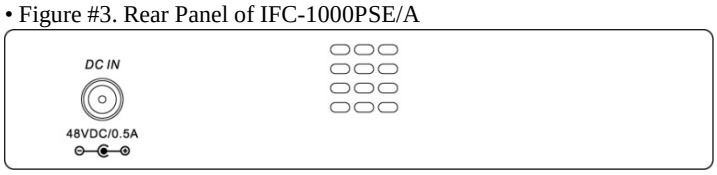
• Figure #1. Front Panel of IFC-1000PSE



• Figure #2. Rear Panel of IFC-1000PSE-AC



• Figure #3. Rear Panel of IFC-1000PSE/A



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Specifications

Standards
IEEE802.3 10Base-T, IEEE802.3u 100Base-TX
IEEE802.3ab 1000Base-T, 802.3z 1000Base-SX/LX
IEEE802.3x flow control
IEEE802.3af -2003 PSE (Power Sourcing Equipment)

10/100/1000Base-T RJ-45 Connectors
One RJ-45 connector is provided for connection to either MDI-X (to PC) or MDI (to HUB) equipment. Utilizing auto MDI/MDIX allows all UTP connections to be made using only a common straight-through UTP cable.

PSE Output Power
Class 0 : 15.4W , Class 1 : 4W, Class 2 : 7W, Class 3 : 15.4 w

RJ-45 Pin Assignment

Pin 1	TX/RX A+	V+	Pin 5	TX/RX C -	
Pin 2	TX/RX A -	V+	Pin 6	TX/RX B -	V-
Pin 3	TX/RX B+	V -	Pin 7	TX/RX D+	
Pin 4	TX/RX C+		Pin 8	TX/RX D -	

Fiber Optic Connectors
One SFP cage is provided for SFP fiber optic transceiver.
IFC-1000PSE with SFP requires duplex LC connector cable
SFP for single fiber BiDi may have single LC or SC connector.

Environment
Temperature: Operating -- 0 to 50℃, Storage - 0 to 70℃
Humidity: -- 10 to 90%, (non-condensing)

Power : IFC-1000PSE-AC : Internal AC 100 ~ 240VAC ±10%
IFC-1000PSE/A : External DC 48V in AC adapter

Dimensions: 147 x 162 x 36 (D x W x H)mm

Net Weight: 405g

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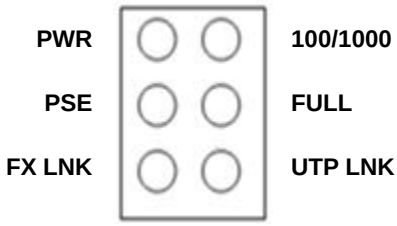
LED Indicators



LED	Function	State	Status
PWR	Converter Power	ON OFF	Power on Power off
PSE	PSE Status	ON OFF	PSE power in-use PSE standby
FX LNK	Fiber link Status	ON OFF	Fiber link is ok No Fiber link
100/1000	LAN Speed Status	Orange Green OFF	1000Mbps 100Mbps 10Mbps
FULL	LAN Duplex mode	ON OFF	Full duplex Half duplex
UTP LNK	UTP link Status	ON OFF	UTP link is ok No UTP link

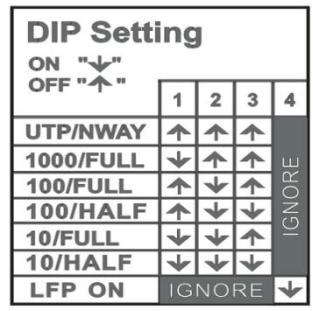
Dip Switch Setting

The **IFC-1000PSE** is provisioned through the use of a single 4-pole DIP (Dual Inline Package) switch located on the front panel. Setting a switch down places it in the ON position.

Switches 1&2 provide setting auto-negotiation (Nway) or manual forced speed of 10, 100 or 1000. Default is all OFF.

Switch 3, when ON (down), sets the forced Half Duplex for either 10Base or 100Base, or sets Full Duplex when OFF (up).

Switch 4 is used to enable the LFP (Link Fault Pass-Thru) function. LFP is enabled when the switch is ON (down).

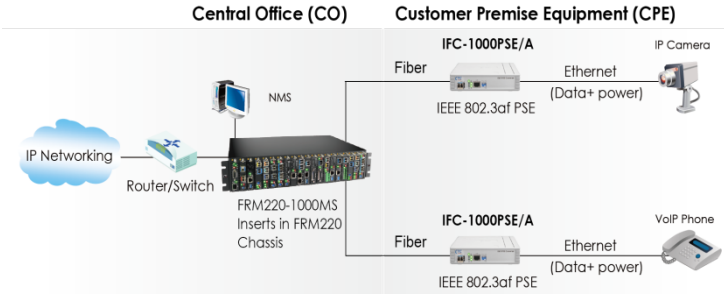


Installation

Connect the Ethernet cable to the IFC-1000PSE. The converter will sense whether to operate in Full or Half mode and will be indicated on the LED. Follow the connection examples below.

Connections

The following example illustrates the connection scheme when connecting from IP Camera and VoIP Phone to 10/100/1000Base-T UTP port through the IFC-1000PSE fiber converter.



Link-Fault-Pass Through (LFP) Note

This media converter incorporates a fiber link pass through feature which allows indirect sensing of a fiber link loss via 10/100/1000 Base-TX UTP connection. Whenever the media converter detects a link loss condition on the receive fiber (FX LNK Off), it disables its UTP transmitter so that a link loss condition is sensed on the receive UTP port. (See the following figure) The link loss can then be sensed and reported by network management agent at the remote UTP port's host equipment.

The LFP feature has no effect on the media converter's UTP Link LED, which continues to function normally, independent of the state of the fiber LNK LED and the UTP transmitter. This feature is disabled by default from the factory.

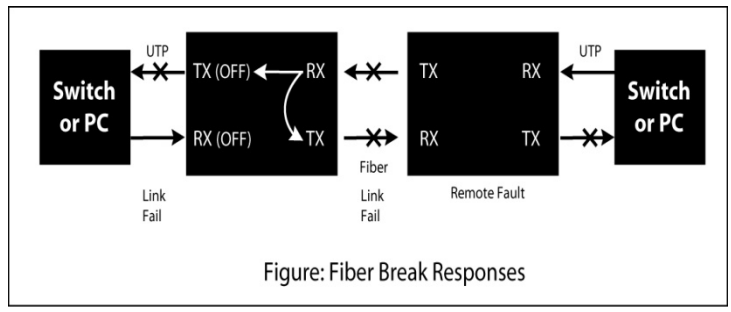


Figure: Fiber Break Responses